

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:

Joon-hyun YANG

Application No. 10/826,278

Group Art Unit: 2629

Filed: April 19, 2004

Examiner Abbas I Abdulsalam

Customer No.: 38209

Confirmation No. 9920

For: SINGLE-SIDED DRIVER USED WITH A DISPLAY PANEL AND A METHOD
OF DESIGNING THE SAME

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**COMMENTS ON STATEMENT OF REASONS FOR ALLOWANCE
UNDER 37 C.F.R. § 1.104**

Sir:

The Examiner provided a Statement of Reason for Allowance in the Office Action, mailed May 17, 2007, in which the Examiner indicated that Claim 19 is allowable as:

Schermerhorn does not teach single-sided driver circuit to drive X and Y electrodes of a display panel, comprising: as isolation and reset circuit combination to establish a current flow path to generate reset ramp voltage waveforms for the X and Y axes electrodes to eliminate wall charges on the display panel while cutting off the energy recovery path during a reset period; a scan pulse generation circuit connected with the isolation and reset circuit combination and the X and Y axes electrodes to establish a current flow path to generate voltage waveforms for the X and Y axes electrodes to make wall charges on the display panel during an address period; and a sustain driver circuit connected with the isolation and reset circuit combination and the X and Y axes electrodes to establish charging/discharging paths to charge/discharge the display panel according to predetermined switching sequences to drive the display panel during the sustain discharge period, and to establish predetermined current flow paths to generate a reset voltage waveform and an address

discharge voltage waveform in combination with the reset circuit and the scan pulse generation circuit, respectively, during the reset period and the address period.

Applicant agrees with the Examiner that independent claim 19 is allowable for at least the reasons acknowledged by the Examiner, and submits that independent claims 1, 14, 22, 24, and 26 are allowable over the prior art of record for at least the reasons as discussed below.

With regard to independent claim 1, Applicant respectfully submits that the prior art of record does not teach, disclose, or suggest, among other things, a "single-sided driver circuit" having "an isolation and reset circuit combination which isolates an energy recovery path and establishes a current flow path to generate reset voltage waveforms that are supplied to both the X and Y axes electrodes to eliminate wall charges in the display panel during a reset period," "a scan pulse generation circuit which establishes a current flow path to generate address discharging voltage waveforms to be supplied to the X and Y axes electrodes to generate wall charges in the display panel during an address period," and "a sustain driver circuit which establishes charging/discharging paths to charge/discharge the display panel according to the predetermined switching sequences to drive the display panel during a sustain discharge period, and establishes a current flow path to generate the reset voltage waveform and the address discharging voltage waveforms during the reset period and the address period, respectively, in combination with the isolation and reset circuit and the scan pulse generation circuit."

With regard to independent claim 14, on page 14 of the May 17, 2007 Office Action, the Examiner acknowledges and Applicant agrees that Schemmerhorn "does not teach a single sided driver" including

a single-sided driver circuit comprising an isolation and reset circuit combination which isolates an energy recovery path and establishes a current flow path to generate reset voltage waveforms that are supplied to both X and Y axes electrodes to eliminate wall charges in the display panel during a reset period; a scan pulse generation circuit which establishes a current flow path to generate address discharging voltage waveforms to be supplied to the X and Y axes electrodes to generate wall charges in the display panel during an address period; a sustain driver circuit which establishes charging/discharging paths to charge/discharge the display panel according to the predetermined switching sequences to drive the display panel during a sustain discharge period, and establishes a current flow path to generate the reset voltage waveform and the address discharging voltage waveforms during the reset period and the address

period, respectively, in combination with the isolation and reset circuit and the scan pulse generation circuit.

Applicant's independent claim 14 recites, among other things, "selecting circuit elements for an isolation and reset circuit combination," "selecting circuit elements for a scan pulse generation circuit," and "selecting circuit elements for a sustain driver circuit" which are identified by the Examiner in the above-quoted passage that Schermerhorn "does not teach." In at least the Office Action of December 16, 2008, the Examiner does not describe that Kenji, or any other prior art reference of record, teaches or suggests at least these features. Applicant respectfully submits that the prior art of record fails to teach, disclose, or suggest the features of claim 14 for at least the reasons discussed above.

With regard to independent claim 22, on page 14 of the May 17, 2007 Office Action, the Examiner acknowledges and Applicant agrees that Schermerhorn "does not teach a single sided driver" that "establishes a current flow path to generate reset voltage waveforms that are supplied to both X and Y axes electrodes to eliminate wall charges in the display panel during a reset period," that "establishes a current flow path to generate address discharging voltage waveforms to be supplied to the X and Y axes electrodes to generate wall charges in the display panel during an address period," that "establishes charging/discharging paths to charge/discharge the display panel according to the predetermined switching sequences to drive the display panel during a sustain discharge period," and that "establishes a current flow path to generate the reset voltage waveform and the address discharging voltage waveforms during the reset period and the address period, respectively." Applicant's independent claim 22 recites, among other things, "establishing a current flow path to generate reset ramp voltage waveforms for the X and Y axes electrodes to reduce wall charges on the display panel while cutting off the energy recovery path during a reset period," "establishing a current flow path to generate voltage waveforms for the X and Y axes electrodes to make wall charges on the display panel during an address period," "switching current between current flow paths to generate predetermined driving voltage waveforms alternating in polarity with respect to a reference voltage across X and Y axes electrodes according to predetermined switching sequences to drive the display panel during a sustain discharge period," and "establishing predetermined current flow paths to generate a reset voltage waveform and an address discharge voltage waveform during the reset period and the address period" which are identified

by the Examiner in the above-quoted passage that Schermerhorn "does not teach." As such, Applicant respectfully submits that the prior art of record fails to teach, disclose, or suggest each of the features recited in independent claim 22 for at least the reasons discussed above.

With regard to independent claim 24, on page 14 of the May 17, 2007 Office Action, the Examiner acknowledges and Applicant agrees that Schermerhorn fails to teach or suggest an "isolation and reset circuit combination which isolates an energy recovery path and establishes a current flow path to generate reset voltage waveforms that are supplied to both ... electrodes ... during a reset period," a "scan pulse generation circuit which establishes a current flow path to generate address discharging voltage waveforms" to be "supplied" to the "electrodes" during an "address period," a "sustain driver circuit" to provide a "current flow path" to "generate" a "reset voltage waveform." Applicant's claim 24 recites, among other things, "an isolation and reset circuit combination to establish a current flow path to generate reset ramp voltage waveforms for a first electrode and a second electrode during a reset period," a "scan pulse generation circuit connected with the isolation and reset circuit combination and the first and second electrodes to establish a current flow path to generate voltage waveforms during an address period," and first and second "sustain driver circuits" to provide "current" to "electrode[s]" of the "display panel." In at least the Office Action of December 16, 2008, the Examiner does not describe that Kenji, or any other prior art reference of record, teaches or suggests at least these features. Applicant submits that claim 24 is not taught, disclosed or suggested by the prior art of record for at least the above reasons.

With regard to independent claim 26, on page 14 of the May 17, 2007 Office Action, the Examiner acknowledges and Applicant agrees that Schermerhorn fails to teach or suggest an "isolation and reset circuit combination which isolates an energy recovery path and establishes a current flow path to generate reset voltage waveforms that are supplied to both ... electrodes ... during a reset period," a "scan pulse generation circuit which establishes a current flow path to generate address discharging voltage waveforms" to be "supplied" to the "electrodes" during an "address period," a "sustain driver circuit" to provide a "current flow path" to "generate" a "reset voltage waveform." Applicant's claim 26 recites, among other things, an "isolation and reset circuit combination to establish a current flow path to generate reset ramp voltage waveforms for the first axis electrode and the second axis electrode during a reset period," and a "scan pulse generation circuit connected with the isolation and reset circuit combination and

the first and second axis electrodes to establish a current flow path to generate voltage waveforms during an address period." In at least the Office Action of December 16, 2008, the Examiner does not describe that Kenji, or any other prior art reference of record, teaches or suggests at least these features. Applicant submits that claim 26 is not taught, disclosed or suggested by the prior art of record for at least the above reasons.

With regard to claims 2, 3, 5-13, 15-21, 23, and 25, Applicant respectfully submits that these claims may also include features not taught, disclosed, or suggested by the prior art of record.

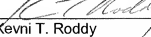
As specified in MPEP 1302.14, "care must be taken to ensure that such reasons are accurate, precise, and do not place unwarranted interpretations, whether broad or narrow, upon the claims." It is respectfully submitted that the Examiner's Statement is not an accurate quote with respect to each of the allowed claims, and instead, raises "possible misinterpretations, and possible estoppel effects" (MPEP 1302.04) and accordingly, should be disregarded.

While being useful in understanding the invention, the Examiner's comments could lead to an unwarranted and unnecessary narrowing interpretation of the claims. Therefore, it is further submitted that the claims should not be interpreted based on the Examiner's statement.

It is further submitted that the claims are not constrained by such device limitations and that the claims speaks for themselves as to what features are included therein and are their own best evidence as to the reasons for allowance of same.

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